

REMARKS

Claims 1-30 and 32-36 are pending in this Application. Claims 1 and 22 are amended with this Response. The Examiner's rejections will now be respectfully addressed in turn. An RCE entering this Response is filed herewith.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-15, 18-20, and 32-36 are rejected under 35 U.S.C. 102(b) as being obvious over United States Publication No. 2003/0231607 to Scanlon in view of United States Publication No. 2003/028685 to Mahany. Applicant respectfully traverses this rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references, and some expectation of success in making the suggested modification or combination. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Applicant's claim 1 has been amended to recite *inter alia*,

“transmitting a signal from a transmitter to a receiver on a non-periodical basis at a time indicated by a previous signal transmitted from the transmitter and received by the receiver, the transmitter signal including a message frame having a message part indicative of a time of transmission for a later signal,” and

Applicant's claim 22 has been similarly amended to recite *inter alia*,

“at least one transmitter configured to be able to include a message part indicative of a time of transmission for a later signal when transmitting a transmitter signal on a non-periodical basis at a time indicated by a previous signal transmitted from the transmitter and received by the receiver.”

Neither Scanlon nor Mahany, taken alone or in combination, teach transmitting a signal on a non-periodical basis. In support of this statement, Applicant respectfully asserts the following.

First it is respectfully noted that Scanlon relates to a Carrier Sense Multiple Access (CSMA) wireless network system (WLAN), in particular a network using a media access control (MAC) protocol, by means of which a network master device 16' (fig. 2) transmits downlink packets to wireless client devices 12', which can further transmit uplink packets using the MAC protocol, cf. e.g. paragraph [0022] and [0023].

As is shown in Figure 5 of Scanlon, one polling cycle of such a MAC protocol communication (please see paragraphs [0024] and [0025]) wherein a number of pairs 40 of slots are allocated to communication between a master and a slave (first with a slot for transmission from the master to the slave and thereafter with a slot for transmission from the slave to the master). Such a polling cycle is initiated by a Registration Beacon slot 42', 42, followed by a CSMA contention slot 44. The Registration Beacon slot contains information regarding the ID of the master and slot scheduling data, comprising a list of registered slave identities as well as the respective next slot pointers (i.e. the pair of slots 40 in the polling cycle), wherein communication takes place between the master and the respective slave.

Accordingly, a slave as discussed above (i.e. in Scanlon), will necessarily have to be able to receive communication at least during the Registration Beacon slot for each and every cycle and be able to communicate during the pair of slots (which the slave has been

informed of during the Registration Beacon slot) in order for the communication to be successful. It should additionally be noted that each slave has to receive or listen to the Registration Beacon slot for each and every polling cycle.

Further, the above-mentioned CSMA contention slot 44 is designated for slave devices, which are not registered within the wireless network (i.e. unsynchronized slaves), which request service from the master, wherein successful requests will be included in the next Registration Beacon slot (please see paragraphs [0027] and [0029]). Thus, Scanlon is specifically addressing the problem of synchronizing a new or an unsynchronized slave with the network.

In addressing this problem, Scanlon teaches packets from the master to the slave devices to be of the form shown in Figure 3, with the packets from the slave devices to the master being of the form shown in Figure 4 (please see paragraph [0022]). Each of these contains a master/slave-bit indicating whether the packet is from a master or a slave. Further, the master packet contains within the header a resynchronisation pointer (RP) indicating the number of remaining slots before the transmission of the beacon slot 42 (please see Figure 5). Thus, as explained in paragraphs [0030] and [0031] a new or unsynchronized slave can activate its receiver and listen to any master packet (indicated by the master/slave-bit), from which the RP can be extracted. The slave can now enter a low-power sleep-mode until the registration beacon, wherein the slave can regain synchronization or, if it is a new slave, can request service during the next slot, the CSMA contention slot 44.

Further, the header contains a Next Slot Pointer (NSP) (please see paragraphs [0033] and [0035]), which indicates the number of slots that the slave must wait for its next master-to-slave packet, thereby allowing a slave to communicate with the master (for example two times within a superframe).

However, the slave will still need to listen during each Registration Beacon slot, wherein the next allocated slot for the slave will be indicated (please see the last four lines of paragraph [0035] and the last six lines of paragraph [0036]).

The above said, as the superframes are transmitted cyclically and with fixed period (cf. e.g. Fig. 5: "One polling cycle – 64 slots (6 bits)"), synchronization must be performed repeatedly and furthermore, the receivers of the slaves must be turned on for each registration beacon, even in cases where it is not necessary to transmit to or from the slave in question during a specific superframe.

In light of the above discussed teachings of Scanlon, it is respectfully asserted that the Scanlon system relies on cyclically or periodically repeated frames with fixed lengths, which are divided into slots. The slave units have to be synchronized with the transmitter during each and every registration beacon, and as such, the slave units are required to be in listening mode at least every time a registration beacon is transmitted from the receiver (as well as in cases where a specific slave unit is not wanted for communication during a superframe).

Such reliance in Scanlon on periodically repeated frames is not only contrary to that which is recited in Applicant's claims, but is also a non-optimal in cases where communication with one or more slave units is seldom and/or scarce. In fact, the Scanlon system as taught is disadvantageous in that that the slave unit receivers thereof are required to be active not only when receiving or transmitting the data packets, but also when all registration beacons are transmitted, thereby giving rise to an undesirable power consumption.

In contrast to the disadvantageous elements of Scanlon discussed above, at least one of the problems addressed by Applicant's disclosure includes provision of a method of and a system for transmitting signals from a transmitter to a receiver allowing power

consumption/efficiency to be optimized, whereby a high degree of flexibility is achieved with regards to time periods between transmittals.

This problem is solved by exemplary embodiments of a method and a communication system such as that which may be protected by amended claims 1 and 22, respectively. In other words, that which is disclosed by the Applicant makes it possible to have transmittal intervals that need not be fixed, as well as receivers (i.e. all receives) that need not be activated periodically with one and the same period.

The above is desirable for applications where flexibility is important, (i.e. where very frequent communication may not be necessary for all receivers), and where fast updating of such things as measured valued, control signals, interrogation etc. may not be not necessary. Further, in many applications it is desirable to be able to arrange the distance between polling times arbitrarily (i.e. in view of the particular needs, and optionally specified individually for receivers). Thus, at certain times the polling may be performed often, while at other times the polling may be performed with relatively large intervals, with a very flexible and individually operational mode.

For at least the above reasons, Applicant respectfully submits that Scanlon does not teach every element of Applicant's claims. Further, as Mahany also requires synchronization to be performed cyclically and with fixed periods, Mahany does not remedy the above discussed deficiencies of Scanlon. Accordingly, Applicant respectfully submits that Applicant's claims 1-15, 18-29, and 32-36 are not obvious over the proposed combination of Scanlon and Mahany.

Claims 16 and 17 are also rejected under 35 U.S.C. 103(a) as being obvious over Scanlon in view of Mahany and United States Patent No. 6,570,857 to Haartsen. Applicant respectfully traverses.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references, and some expectation of success in making the suggested modification or combination. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Applicant respectfully notes that claims 16 and 17 depend from claim 1. As Haartsen does not remedy the deficiencies of Scanlon and Mahany (and is not used as such by the Examiner), for at least the above discussed reasons Applicant's claims 16 and 17 are not obvious over the proposed combination of Scanlon, Mahany, and Haartsen.

Conclusion

All of the objections and rejections are herein overcome. In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. No new matter is added by way of the present Amendments and Remarks, as support is found throughout the original filed specification, claims and drawings. Prompt issuance of Notice of Allowance is respectfully requested.

The Examiner is invited to contact Applicant's attorney at the below listed phone number regarding this response or otherwise concerning the present application.

Applicant hereby petitions for any extension of time necessary under 37 C.F.R. 1.136(a) or 1.136(b) for entry and consideration of the present Reply.

If there are any charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,

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